



Energy Procurement
Renewable Energy
Development
245 Market Street, Room 1309
San Francisco, CA 94105-1702

Mailing Address
Mail Code N13W
P. O. Box 770000
San Francisco, CA 94177-0001

February 12, 2015

Ms. Michele Dermer
EPA Region 9, WTR-9
75 Hawthorne St.
San Francisco, CA 94105

RE: Submittal of Oxygen-Depleted Air Analytical Results
Permit No. R9UIC-CA5-FY13-1
PG&E Test Injection/Withdrawal Well 1
King Island, San Joaquin County, California

Dear Michele:

This submittal is intended to comply with Part II.D.5.b of EPA Permit No. R9UIC-CA5-FY13-1 for the PG&E Test Injection/Withdrawal Well 1. Enclosed you will find the following:

- Laboratory analytical results of the oxygen-depleted air sample, collected from the I/W well prior to injection operations

If you have any questions regarding this submittal or require additional information, please feel free to contact me at (415) 973-6270.

Sincerely,

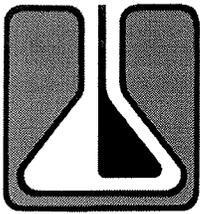
A handwritten signature in blue ink, appearing to read 'Mike Medeiros'.

Mike Medeiros
Manager, Renewable Energy Development

Enclosures:

- (1) Laboratory analytical results from the oxygen-depleted air sample, collected from the I/W well prior to injection

Laboratory Analytical Results from the Oxygen-Depleted Air
Sample, Collected from the I/W Well Prior to Injection



ZALCO LABORATORIES, INC.

Analytical & Consulting Services

4309 Armour Avenue
Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

February 12, 2015

Mike Medeiros
PG & E
P.O. Box 770000
San Francisco, CA 94177-001

TEL: (661) 321-4556
FAX: (661) 872-5119

Project ID: Master
RE: 1502137

Dear Mike Medeiros:

Zalco Laboratories, Inc. received 1 samples on 2/11/2015 for the analyses presented in the following report.

We appreciate your business and look forward to serving you in the future. Please feel free to call our office if you have any questions regarding these test results.

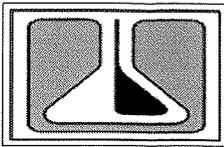
Sincerely,

A handwritten signature in cursive script that reads "Juan Magana".

Juan Magana
Project Manager
CC:

NSS: Non Sufficient Sample H: Exceeds Analysis Hold Time TTLC: Total Threshold Limit Concentration STLC: Soluble Threshold Limit Concentration TCLP: Toxicity Characteristic Leaching Procedure MCL: Maximum Contaminant Level *: See Case Narrative
The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Note: Samples analyzed for regulatory purposes should be put on ice immediately after sampling and received by the laboratory at temperatures between 0-6°C. Microbiological analysis requires samples to be at least 4-10°C when received at the laboratory. For additional information regarding the limitations of the method(s) referred to, please call us at 661-395-0539.



ZALCO LABORATORIES, INC.
 4309 Armour Avenue, Bakersfield, CA 93308 (661) 395-0539 FAX (661) 395-3069 www.zalcolabs.com
 2186 Eastman Avenue, Suite 103, Ventura, CA 93003 (805) 477-0114 FAX (805) 477-0125

Pacific Gas & Electric Co.
 P.O. Box 770000
 San Francisco CA 94177-0001

Laboratory No: 1502137-01
 Date Received: 02/11/15
 Date Analyzed: 02/12/15
 Date Completed: 2/12/15 11:44 AM

Attention: Mike Medeiros

Sample Description: I/W Wellhead - Primary
 Sampled: 2/11/2015 @ 11:55:00 AM by Charles Tyler

Chromatographic Analysis, ASTM D-1945-03, ASTM D-3588-98, GPA 2145-09, ASTM D-3246-11

Constituent:	Mole %	Vol%	Weight %	GPM	GPM		CHONS%
					Fractions		
Oxygen	3.823	3.118	4.343	(Gallons per			Carbon, C
Nitrogen	96.177	96.882	95.657	1000.000			0.00
Hydrogen	0.000	0.000	0.000	cubic feet)			Hydrogen, H
Carbon Dioxide	0.000	0.000	0.000				0.00
Carbon Monoxide	0.000	0.000	0.000				
Hydrogen Sulfide	0.000	0.000	0.000				Oxygen, O
Methane	0.000	0.000	0.000	0.0000	C1+ = 0.0000		4.34
Ethane	0.000	0.000	0.000	0.0000	C2+ = 0.0000		
Propane	0.000	0.000	0.000	0.0000	C3+ = 0.0000		Nitrogen, N
IsoButane	0.000	0.000	0.000	0.0000	C4+ = 0.0000		95.66
n-Butane	0.000	0.000	0.000	0.0000	C4+ = 0.0000		
IsoPentane	0.000	0.000	0.000	0.0000	C5+ = 0.0000		Sulfur, S
n-Pentane	0.000	0.000	0.000	0.0000	C5+ = 0.0000		0.00
Hexanes	0.000	0.000	0.000	0.0000	C6+ = 0.0000		
Totals:	100.00	100.00	100.00	0.0000			100.00

Flammable Gases:	0.000	
Gas Properties calculated @ STP: degrees F.	60	
Measurement Base Pressure @ STP: psia	14.696	H/C Ratio: #DIV/0!

Gas State	Dry		Wet
	Btu / Cu. Ft	Btu / lb	Btu / Cu. Ft
Gross, Ideal Gas	0.00	0.00	0.00
Net, Ideal Gas	0.00	0.00	0.00
Gross, Real Gas	0.00		0.00
Net, Real Gas	0.00		0.00

Relative Gas Density; [Air=1] Ideal: 0.9725
 Specific Gravity, [Air=1] Real gas: 0.9722
 Real Gas Density, Lb/Cu.Ft.: 0.0742
 Specific Volume, Cu.Ft./Lb: 13.4692
 Relative Liquid Density @ 60F/60F: 0.8198
 Compressibility, 'z': 0.9997
 Fuel kg per kg-mole Molecular wt avg 28.166

#1

RUSH!

RUSH!

RUSH!!



ZALCO LABORATORIES, INC.

CHAIN OF CUSTODY, ID# **CAES #001**

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Page 1 of 1

Zalco Lab # _____

Client PO # _____

1502137

REPORT INFO		INVOICE INFO		ANALYSIS		PROJECT ID:	
Client: <u>Pacific Gas & Electric Co.</u>	Invoice To: <input checked="" type="checkbox"/> Same as Client	Address: <u>P.O. Box 7760</u>	City, State, Zip: <u>San Francisco, CA 94120-7760</u>	Attention: <u>Accounts Payable</u>	Phone: _____	Results <input type="checkbox"/> _____	Results <input type="checkbox"/> _____
Address: <u>P.O. Box 770000</u>	City, State, Zip: <u>San Francisco, CA 94177-0001</u>	Attention: <u>Mike Medeiros</u>	Phone: <u>415-973-6270</u>	Results <input type="checkbox"/> _____	Results <input type="checkbox"/> _____	PROJECT ID: _____	
SAMPLED BY: <u>Charles Tyler</u>		EMPLOYED BY: <u>BES</u>		PROJECT ID: _____		QUOTE ID: _____	

Sample No.	Sample Description	Sample			Type*	CONTAINERS	ANALYSIS	T E M P E R A T U R E (C)	COMMENTS:
		Date	Time						
1	I/W Wellhead - Primary	2-11-15	11:55	G	1	X			Turnaround Time: Routine <input type="checkbox"/> working days <input type="checkbox"/> Rush By <u>18 hrs.</u> working days Send Copy to State of CA? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Attention To: <u>Mark Auburn</u> Send Copy to County? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> County _____
2	I/W Wellhead - Duplicate	2-11-15	11:58	G	1				Send Results to: <u>mausburn@gmail.com</u> <u>lstinson@csenergyventures.com</u> Note: If primary sample indicate > 5.0% O ₂ , please call Charlie Stinson 503-307-6654 for further directions

RELINQUISHED By: Signature	PRINT	COMPANY	Date	Time	RECEIVED By: Signature	PRINT
<i>Charles Tyler</i>	Charles Tyler	Bluewater	2/11/15	12:19	<i>KD 20</i>	K Springman
			2/11/15	11:56		

NOTE: Samples are discarded 30 days after results unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client's expense.

*Sample Type Key: AQ-Aqueous; BS-Biosolid; DW-Drinking Water; GW-Ground Water; G-Gas; LPG-Liquid Petroleum Gas; OL-Oil; O-Other; P-Petroleum; S-Soil/Solid; ST-Storm Water; WW-Wastewater

*Sample No.: FOR OFFICE USE ONLY